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10/675,689	09/30/2003	Min Kuo	66329/00020	6171

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EXAMINER
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MCLEAN, NEIL R

ART UNIT	PAPER NUMBER
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2625

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,689	<b>Applicant(s)</b> KUO ET AL.	
	<b>Examiner</b> Neil R. McLean	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/30/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because Figure 3 is omitted but is referred to in the specification (Page 5, line 21). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa et al. (US 6,348,971) in view of well known prior art.

Regarding Claim 1:

Owa et al. teaches a system for optimized routing of print jobs comprising:

means adapted (Column 4, lines 44-52) for selectively communicating the print job data to at least one of a plurality of associated printer devices (2a – 2d in Figure 1) so as to generate a printout therefrom;

terminal means (See Status Monitor Section 13 in Figure 2) adapted for receiving status data (See Status Information in Figure 4) from at least one of the plurality of associated printer devices, which status data includes data representative of a commitment level of the at least one associated printer device relative to dominant print job requests (Column 4, lines 6-13 and see Status Monitor Section 13 in Figure 2 and Flowchart Step S3 in Figure 6);

test means (the software or device that performs the functions described in Column 5, lines 41-60) adapted for testing the status data against selected test

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criteria (See Printer Selection Conditions in Figure 5) to determine whether at least one alternative associated printer device is desired for printing (Column 5, lines 41-44 and lines 51-57 and see Output Destination Printer Selection Section 11 in Figure 2 and Flowchart Steps S5 and S6 in Figure 6); and

the terminal means (See Data Transfer Section 17 in Figure 2) including means adapted for selectively redirecting the print job data from a primary designated associated printer device to a secondary associated printer device in accordance with an output of the test means (Column 7, lines 3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing print job data.

However it is well known in the art for a computer to have a <sup>print queue</sup> ~~buffer~~ for providing <sup>kp</sup> temporary storage of data that is to be processed at a later time.

(Official Notice)

At the time of the invention it would have been obvious to one of ordinary skill in the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being lost by using a buffer; and it would also prevent the host from sending print data to the printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing system of Owa et al. to obtain the invention of Claim 1.

Regarding Claim 2:

The system for optimized routing of print jobs of claim 1 wherein the test criteria includes data representative of a commitment level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 3:

The system for optimized routing of print jobs of claim 2 wherein the print job data is selectively redirected to the secondary associated printer device which has the lowest commitment level (Column 7, lines 3-6 and see Flowchart Steps S19/S21 in Figure 6).

Regarding Claim 4:

The system for optimized routing of print jobs of claim 2 wherein the print job data is automatically selectively redirected to the secondary associated printer device without intervention from an associated user (Column 7, lines 12-22 and Flowchart Steps S20 and S21 (Generate and Transfer Print Data to Optimum Printer)).

Regarding Claim 5:

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The system for optimized routing of print jobs of claim 2 further comprising means adapted for storing user selection data which pre-authorizes automatic routing of print job data to the secondary associated printer device (Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 6:

The system for optimized routing of print jobs of claim 2 wherein the means for selectively redirecting the print job data includes:

means adapted for prompting an associated user for permission to redirect the print job data from the primary designated associated printer device to the secondary associated printer device (see Flowchart Steps S46 and S47);

means adapted for receiving user selection data resultant from a prompt of a user for permission to redirect the print job data (See User Approved Screen in Figure 12b); and

means adapted for routing the print job data in accordance with the user selection data (Column 13, lines 1-8).

Regarding Claim 7:

The system for optimized routing of print jobs of claim 6 wherein the means for selectively redirecting the print job data the further comprises means adapted for displaying all available associated printer devices for the user to select a secondary associated printer device in which to route the print job data

(Column 12, lines 55-60).

Regarding Claim 8:

The system for optimized routing print jobs of claim 6 wherein the means for redirecting the print job data further comprises:

means adapted to receive user input to terminate the routing of the print job data to the secondary associated printer device (Column 13, lines 1-4 and User Approved Screen 81 in Figure 12b); and

terminating means adapted to terminate routing of the print job data to the secondary associated printer device in response to user input (see Cancel button 84 in Figure 12b).

Regarding Claim 9:

The system for optimized routing of print jobs of claim 6 wherein the means adapted for prompting an associated user is a graphical user interface (See Figures 12a and 12b).

Regarding Claim 10:

A method for optimized routing of print jobs comprising the steps of:

selectively communicating the print job data to at least one of a plurality of associated printer devices (2a – 2d in Figure 1) so as to generate a printout



therefrom (Column 4, lines 44-52 and see Print Data Generation Section 18 in Figure 2);

receiving status data (See Status Information in Figure 4) from at least one of the plurality of associated printer devices, which status data includes data representative of a commitment level of the at least one associated printer device relative to dominant print job requests (Column 4, lines 6-13 and see Status Monitor Section 13 in Figure 2 and Flowchart Step S3 in Figure 6);

testing (the software or device that performs the function described in Column 5, lines 41-60) the status data against selected test criteria (See Printer Selection Conditions in Figure 5) to determine whether at least one alternative associated printer device is desired for printing (Column 5, lines 41-44 and lines 51-57 and see Output Destination Printer Selection Section 11 in Figure 2 and Flowchart Steps S5 and S6 in Figure 6); and

selectively redirecting the print job data from a primary designated associated printer device to a secondary associated printer device in accordance with an output of the test means (Column 7, lines 3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing print job data.

However it is well known in the art for a computer to have a <sup>print queue</sup> ~~buffer~~ for providing temporary storage of data that is to be processed at a later time. *bp*

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At the time of the invention it would have been obvious to one of ordinary skill in the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being lost by using a buffer; and it would also prevent the host from sending print data to the printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing system of Owa et al. to obtain the invention of Claim 10.

Regarding Claim 11:

The method for optimized routing of print jobs of claim 10 wherein the test criteria includes data representative of a commitment level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 12:

The method for optimized routing of print jobs of claim 11 wherein the print job data is selectively redirected to the secondary associated printer device which has the lowest commitment level (Column 7, lines 3-6 and see Flowchart Steps S19/S21 in Figure 6).

Regarding Claim 13:

The method for optimized routing of print jobs of claim 11 wherein the print job data is automatically selectively redirected to the secondary associated printer device without intervention from an associated user (Column 7, lines 12-22 and Flowchart Steps S20 and S21 (Generate and Transfer Print Data to Optimum Printer)).

Regarding Claim 14:

The method for optimized routing of print jobs of claim 11 further comprising the step of storing user selection data which pre-authorizes automatic routing of print job data to the secondary associated printer device (Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 15:

The method for optimized routing of print jobs of claim 11 wherein the step of selectively redirecting the print job data includes the steps:

prompting an associated user for permission to redirect the print job data from the primary designated associated printer device to the secondary associated printer device (see Flowchart Steps S46 and S47);

receiving user selection data resultant from a prompt of a user for permission to redirect the print job data (See User Approved Screen in Figure 12b); and

routing the print job data in accordance with the user selection data  
(Column 13, lines 1-8).

Regarding Claim 16:

The method for optimized routing of print jobs of claim 15 wherein the step of selectively redirecting the print job data further comprises the step of displaying all available associated printer devices for the user to select a secondary associated printer device in which to route the print job data (Column 12, lines 55-60).

Regarding Claim 17:

The method for optimized routing print jobs of claim 15 wherein the step of selectively redirecting the print job data further comprises the steps of:

receiving user input to terminate the routing of the print job data to the secondary associated printer device (Column 13, lines 1-4 and User Approved Screen 81 in Figure 12b); and

terminate routing of the print job data to the secondary associated printer device in response to user input (see Cancel button 84 in Figure 12b).

Regarding Claim 18:

The method for optimized routing of print jobs of claim 15 wherein prompting an associated user is performed via a graphical user interface (See

Figures 12a and 12b).

Regarding Claim 19:

A computer-readable medium for optimized routing of print jobs  
comprising:

means adapted (Column 4, lines 44-52) for selectively communicating the print job data to at least one of a plurality of associated printer devices (2a – 2d in Figure 1) so as to generate a printout therefrom (Column 4, lines 44-52 and see Print Data Generation Section 18 in Figure 2);

terminal means (See Status Monitor Section 13 in Figure 2) adapted for receiving status data (See Status Information in Figure 4) from at least one of the plurality of associated printer devices, which status data includes data representative of a commitment level of the at least one associated printer device relative to dominant print job requests (Column 4, lines 6-13 and see Status Monitor Section 13 in Figure 2 and Flowchart Step S3 in Figure 6);

test means (the software or device that performs the function described in Column 5, lines 41-60) adapted for testing the status data against selected test criteria (See Printer Selection Conditions in Figure 5) to determine whether at least one alternative associated printer device is desired for printing (Column 5, lines 41-44 and lines 51-57 and see Output Destination Printer Selection Section 11 in Figure 2 and Flowchart Steps S5 and S6 in Figure 6); and

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the terminal means (See Data Transfer Section 17 in Figure 2) including means adapted for selectively redirecting the print job data from a primary designated associated printer device to a secondary associated printer device in accordance with an output of the test means (Column 7, lines 3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing print job data.

However it is well known in the art for a computer to have a <sup>print queue</sup> ~~buffer~~ for providing temporary storage of data that is to be processed at a later time. *bp*

(Official Notice)

At the time of the invention it would have been obvious to one of ordinary skill in the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being lost by using a buffer; and it would also prevent the host from sending print data to the printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing system of Owa et al. to obtain the invention of Claim 19.

Regarding Claim 20:

The computer-readable medium for optimized routing of print jobs of claim 19 wherein the test criteria includes data representative of a commitment

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level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 21:

The computer-readable medium for optimized routing of print jobs of claim 20 wherein the print job data is automatically selectively redirected to the secondary associated printer device without intervention from an associated user (Column 7, lines 12-22 and Flowchart Steps S20 and S21 (Generate and Transfer Print Data to Optimum Printer)).

Regarding Claim 22:

The computer-readable medium for optimized routing of print jobs of claim 20 further comprising means adapted for storing user selection data which pre-authorizes automatic routing of print job data to the secondary associated printer device (Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 23:

The computer-readable medium for optimized routing of print jobs of claim 20 wherein the means for selectively redirecting the print job data includes:

means adapted for prompting an associated user for permission to redirect the print job data from the primary designated associated printer device to the secondary associated printer device (see Flowchart Steps S46 and S47);

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means adapted for receiving user selection data resultant from a prompt of a user for permission to redirect the print job data (See User Approved Screen in Figure 12b); and

means adapted for routing the print job data in accordance with the user selection data (Column 13, lines 1-8)..

Regarding Claim 24:

The computer-readable medium for optimized routing print jobs of claim 23 wherein the means for redirecting the print job data further comprises:

means adapted to receive user input to terminate the routing of the print job data to the secondary associated printer device (Column 13, lines 1-4 and User Approved Screen 81 in Figure 12b); and

terminating means adapted to terminate routing of the print job data to the secondary associated printer device in response to user input (see Cancel button 84 in Figure 12b).

Regarding Claim 25:

A computer-implemented method for optimized routing of print jobs comprising the steps of:

selectively communicating the print job data to at least one of a plurality of associated printer devices (2a – 2d in Figure 1) so as to generate a printout



therefrom (Column 4, lines 44-52 and see Print Data Generation Section 18 in Figure 2);

receiving status data (See Status Information in Figure 4) from at least one of the plurality of associated printer devices, which status data includes data representative of a commitment level of the at least one associated printer device relative to dominant print job requests (Column 4, lines 6-13 and see Status Monitor Section 13 in Figure 13 and Flowchart Step S3 in Figure 6);

testing the status data (the software or device that performs the function described in Column 5, lines 41-60) against selected test criteria (See Printer Selection Conditions in Figure 5) to determine whether at least one alternative associated printer device is desired for printing (Column 5, lines 41-44 and lines 51-57 and see Output Destination Printer Selection Section 11 in Figure 2 and Flowchart Steps S5 and S6 in Figure 6); and

selectively redirecting the print job data from a primary designated associated printer device to a secondary associated printer device in accordance with an output of the test means (Column 7, lines 3-6 and Flowchart Step S19 in Figure 6).

Owa et al. discloses all of the above except for a queuing means adapted for queuing print job data.

However it is well known in the art for a computer to have a buffer for providing temporary storage of data that is to be processed at a later time.

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At the time of the invention it would have been obvious to one of ordinary skill in the art to employ a print queue.

The suggestion/motivation for doing so would be to prevent the data from being lost by using a buffer; and it would also prevent the host from sending print data to the printer while the printer is not capable of receiving any print data.

Therefore, it would have been obvious to combine a print queue with the printing system of Owa et al. to obtain the invention of Claim 25.

Regarding Claim 26:

The computer-implemented method for optimized routing of print jobs of claim 25 wherein the test criteria includes data representative of a commitment level of the at least one alternate associated printer device (Column 6, lines 37-54 and Flowchart Steps S16 and S17 in Figure 6).

Regarding Claim 27:

The computer-implemented method for optimized routing of print jobs of claim 26 wherein the print job data is automatically selectively redirected to the secondary associated printer device without intervention from an associated user (Column 7, lines 12-22 and Flowchart Steps S20 and S21 (Generate and Transfer Print Data to Optimum Printer)).

Regarding Claim 28:

The computer-implemented method for optimized routing of print jobs of claim 26 further comprising the step of storing user selection data which pre-authorizes automatic routing of print job data to the secondary associated printer device (Column 5, lines 9-14 and please refer to user settings in Figure 5).

Regarding Claim 29:

The computer-implemented method for optimized routing of print jobs of claim 26 wherein the step of selectively redirecting the print job data includes the steps:

prompting an associated user for permission to redirect the print job data from the primary designated associated printer device to the secondary associated printer device (see Flowchart Steps S46 and S47);;

receiving user selection data resultant from a prompt of a user for permission to redirect the print job data (See User Approved Screen in Figure 12b); and

routing the print job data in accordance with the user selection data (Column 13, lines 1-8).

Regarding Claim 30:

The computer-implemented method for optimized routing print jobs of claim 29 wherein the step of selectively redirecting the print job data further comprises the steps of:

receiving user input to terminate the routing of the print job data to the secondary associated printer device (Column 13, lines 1-4 and User Approved Screen 81 in Figure 12b); and

terminate routing of the print job data to the secondary associated printer device in response to user input (see Cancel button 84 in Figure 12b).

### ***Conclusion***


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato (US 6,760,120) teaches a system that automatically selects an optimum printing device according to the characteristics of a page in units of pages to print the page, thereby reducing the load on the operator in print processing.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. McLean whose telephone number is 571.270.1679. The examiner can normally be reached on Monday through Friday 7:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571.272.7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Neil R. McLean  
06/29/2007

  
KING Y. POON  
~~PRIMARY EXAMINER~~  
Supervising Patent